Dissemination of the Carbapenem Resistant-Acinetobacter baumannii Corresponding to International (IC) Clone I in Northwest of Iran

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Background & Objectives: *Acinetobacter baumannii* is one of the most important nosocomial pathogen that causes a various types of clinical infections. Up to date, three epidemic International clones (IC clones I, II, and III) associated with multidrug-resistant *A. baumannii* have been identified. For first time, in this survey we studied the characteristics and molecular epidemiology of 68 imipenem-non-susceptible *A. baumannii* isolated from Imam Reza Hospital in Tabriz, Iran.

Methods: A total of 68 non-repetitive imipenem-non-susceptible isolates of *A. baumannii* were collected on the basis of the results of E-test Methods from different clinical specimens at Imam Reza Hospital, during a 17-month period. All isolates were identified by standard laboratory methods and species identification was confirmed by detection of blaOXA-51-like. The isolates were typed using sequenc egroup-based multiplex PCR assayto compare theclonal relationship of our isolates with International clonal I lineages. PCR assay was performed to detect OXA-type carbapenemases genes.

Results: In total, 2 isolates (3%) belonged to IC clone I. Both isolates carried blaOXA-51-like, blaOXA-23-like genes, but not blaOXA-58-like, blaOXA-24-like. ISAba1 was present upstream the blaOXA-23-like gene.

Conclusion: This results, for first time, are indicative of clonal spread of OXA-23-producing *A. baumannii* corresponding to known IC I in northwest of Iran. Early recognition and careful monitoring of such strains to control the further dissemination of this organism in hospitals are needed.

Keywords: Resistant-Acinetobacter; Carbapenem; Dissemination